

# **Green Space Cost Calculations 2011** **Evidence Base to Green Spaces and Water Environment SPD**

## **Summary**

| <b>Typology</b>                 | <b>Total cost<br/>in<br/>examples</b> | <b>hectares<br/>in<br/>examples</b> | <b>£/hectare</b> | <b>SPD<br/>ha/415<br/>dwellings</b> | <b>cost per<br/>415<br/>dwellings</b> | <b>cost per<br/>dwelling<br/>pa</b> |
|---------------------------------|---------------------------------------|-------------------------------------|------------------|-------------------------------------|---------------------------------------|-------------------------------------|
| Outdoor pitches                 |                                       |                                     |                  | 1.6                                 |                                       | <b>32.6</b>                         |
| Play areas                      | 27,540.00                             | 0.50                                | 55,080.00        | 0.50                                | 27,540.00                             | 66.36                               |
| Allotments                      | 13,589.51                             | 1.00                                | 13,589.51        | 0.20                                | 2,717.90                              | 6.55                                |
| Informal/ natural green space   | 566,019.04                            | 84.00                               | 6,738.32         | 2.00                                | 13,476.64                             | 32.47                               |
| Parks and Recreation<br>Grounds | 82,587.00                             | 12.60                               | 6,554.52         | 0.30                                | 1,966.36                              | 4.74                                |
| Cemeteries                      | 12,205.00                             | 1.00                                | 12,205.00        | 0.60                                | 7,323.00                              | 17.65                               |
| Totals                          |                                       |                                     |                  | 5.20                                |                                       | 160.37                              |
|                                 |                                       |                                     |                  |                                     |                                       |                                     |

## Informal / Natural Greenspace

### Informal/natural green space maintenance costs for 840,000m<sup>2</sup> Excluding nature reserves

| Item                    | Qty     | unit           | Freq | Rate<br>GM<br>contract<br>2011* | Total<br>maintenance | renewals pa | Total maint<br>+ renewals |
|-------------------------|---------|----------------|------|---------------------------------|----------------------|-------------|---------------------------|
| Fencing post and wire   | 4,000   | lm             | 1    | 0.25                            | 1000                 | 1586.28     | 2586.28                   |
| Fencing post and rail   | 2,000   | lm             | 1    | 0.25                            | 500                  | 2840.47     | 3340.47                   |
| Gates high mobility     | 22      | ea             | 1    | 20                              | 440                  | 475.88      | 915.88                    |
| Gates maintenance       | 13      | ea             | 1    | 20                              | 260                  | 7158.64     | 7418.64                   |
| Walls                   | 1,100   | m <sup>2</sup> | 1    | 0.1                             | 110                  | 83366.08    | 83476.08                  |
| Path high use cycleway  | 10,300  | m <sup>2</sup> | 2    | 0.1                             | 2060                 | 56202.08    | 58262.08                  |
| Path low use pedestrian | 10,400  | m <sup>2</sup> | 2    | 0.1                             | 2080                 | 2059.71     | 4139.71                   |
| Boardwalk               | 320     | m <sup>2</sup> | 2    | 1                               | 640                  | 17705.00    | 18345.00                  |
| bridges                 | 10      | ea             | 1    | 200                             | 2000                 |             | 2000.00                   |
| Existing trees          | 50      |                | 1    | 5                               | 250                  |             | 250.00                    |
| New Trees               | 2,250   | ea             | 1    | 3                               | 6750                 |             | 6750.00                   |
| New scrub               | 63,000  | m <sup>2</sup> | 1    | 0.1                             | 6300                 |             | 6300.00                   |
| New woodand             | 30,000  | m <sup>2</sup> | 1    | 0.02                            | 600                  |             | 600.00                    |
| Renovated hedge 2m high | 2,400   | lm             | 1    | 2.5                             | 6000                 |             | 6000.00                   |
| New hedge 2m high       | 1,400   | lm             | 2    | 2.5                             | 7000                 |             | 7000.00                   |
| Marginal planting       | 29,000  | m <sup>2</sup> | 2    | 1                               | 58000                |             | 58000.00                  |
| rough grass             | 32,600  | m <sup>2</sup> | 2    | 0.02                            | 1304                 |             | 1304.00                   |
| Meadow cut and clear    | 375,800 | m <sup>2</sup> | 2    | 0.16                            | 120256               |             | 120256.00                 |
| Amenity grass           | 241,000 | m <sup>2</sup> | 8    | 0.014                           | 26992                |             | 26992.00                  |
|                         |         |                |      |                                 | 0                    |             | 0.00                      |

|                        |                |                      |    |       |                 |                  |                  |
|------------------------|----------------|----------------------|----|-------|-----------------|------------------|------------------|
| existing pond          | 5,500          | m <sup>2</sup>       | 1  | 0.2   | 1100            |                  | 1100.00          |
| New pond               | 6,400          | m <sup>2</sup>       | 1  | 0.2   | 1280            |                  | 1280.00          |
| New scrape             | 27,950         | m <sup>2</sup>       | 1  | 1.6   | 44720           |                  | 44720.00         |
| Ditches                | 750            | lm                   | 1  | 3.2   | 2400            |                  | 2400.00          |
| Other - culverts etc   | 50             | ea                   | 52 | 2.35  | 6110            |                  | 6110.00          |
| Water troughs          | 10             | ea                   | 52 | 0     | 0               |                  | 0.00             |
| Benches                | 100            | ea                   | 2  | 2     | 400             |                  | 400.00           |
| Picnic tables          | 33             | ea                   | 2  | 2     | 132             |                  | 132.00           |
| Litter bins            | 50             | ea                   | 84 | 0.4   | 1680            |                  | 1680.00          |
| Dog Bins               | 30             | ea                   | 84 | 4     | 10080           |                  | 10080.00         |
| Signs                  | 56             | ea                   | 52 | 1     | 2912            |                  | 2912.00          |
| art work               | 12             | ea                   | 52 | 1     | 624             |                  | 624.00           |
| support for volunteers | 1              | item                 | 1  | 20000 | 20000           |                  | 20000.00         |
|                        |                |                      |    |       |                 |                  | 0.00             |
| <b>Sub total</b>       | <b>833,370</b> | <b>m<sup>2</sup></b> |    |       | <b>333980</b>   | <b>171394.14</b> | <b>505374.14</b> |
| Admin 12%              |                |                      |    |       | 40077.6         | 20567.30         | 60644.90         |
| <b>Total</b>           |                |                      |    |       | <b>374057.6</b> | <b>191961.44</b> | <b>566019.04</b> |

\* Where a contract rate exists

#### Typology

Informal/ natural green space

| Total cost in example | hectares in example | £/hectare | SPD ha/415 dwellings | cost per 415 dwellings | cost per dwelling |
|-----------------------|---------------------|-----------|----------------------|------------------------|-------------------|
| 566,019.04            | 84.00               | 6,738.32  | 2.00                 | 13,476.64              | 32.47             |

## Play Area Annual maintenance costs

|                                                                                          | 2010 prices |                |         |                 |
|------------------------------------------------------------------------------------------|-------------|----------------|---------|-----------------|
| Item                                                                                     | Qty         | Unit           | Rate pa | Total           |
| Inspections                                                                              | 84          | ea             | 38      | 3192            |
| Repairs - wear and tear, accidental damage and vandalism*                                | 1           | item           | 1271    | 1271            |
| Renewal - Whole installation @ £131,499 after 20 years **                                | 1           | item           | 6574.95 | 6574.95         |
| Maintenance of associated recreational space - costs as for parks and recreation grounds | 4400        | m <sup>2</sup> | 3.08    | 13552           |
| Sub Total                                                                                |             |                |         | 24589.95        |
| Admin @12%                                                                               |             |                |         | 2950.794        |
| <b>Total per play area/pa</b>                                                            |             |                |         | <b>27540.74</b> |

\*Unscheduled work for one full year indexed up to 2010 prices

\*\* Renewal of the capital items listed below

| Item                                                  | Qty | Unit           | Rate    | Total           |
|-------------------------------------------------------|-----|----------------|---------|-----------------|
| Fixed Equipment , including delivery and installation | 1   | item           | 44239.6 | 44239.6         |
| Safety surfacing*                                     | 1   | m <sup>2</sup> | 15134.6 | 15134.6         |
| Hard paving                                           | 1   | m <sup>2</sup> | 8964.34 | 8964.34         |
| Fencing                                               | 150 | m              | 40.747  | 6112.05         |
| Gates - pedestrian                                    | 2   | ea             | 989.57  | 1979.14         |
| Gates - maintenance                                   | 1   | ea             | 2328.4  | 2328.4          |
| Furniture -benches                                    | 3   | ea             | 1047.78 | 3143.34         |
| Furniture - picnic table adult                        | 1   | ea             | 1746.3  | 1746.3          |
| Furniture - picnic table child                        | 1   | ea             | 1397.04 | 1397.04         |
| Litter bins                                           | 2   | ea             | 640.31  | 1280.62         |
| Signs                                                 | 2   | ea             | 174.63  | 349.26          |
| Other natural play elements                           | 1   | item           | 8615.08 | 8615.08         |
| <b>sub total</b>                                      |     |                |         | <b>95289.77</b> |
| Contract prelims at 15%                               |     |                |         | 14293.47        |
| <b>sub total</b>                                      |     |                |         | <b>109583.2</b> |
| Design/contract admin 20%                             |     |                |         | 21916.65        |
| <b>Total renewal cost</b>                             |     |                |         | <b>131499.9</b> |

|            | Total pa cost in example | hectares in example | £/hectare | SPD ha/415 dwellings | cost per 415 dwellings | cost per dwelling |
|------------|--------------------------|---------------------|-----------|----------------------|------------------------|-------------------|
| Play areas | 27540                    | 0.5                 | 55080     | 0.5                  | 27540                  | 66.36145          |

## Allotments – Annual costs taken from ABC's costs for 2011

| Work                                                | Costs<br>2011 £<br>per 8<br>hectares | hectares | per<br>hectare |
|-----------------------------------------------------|--------------------------------------|----------|----------------|
| GM contract total contract value at 31 Dec 2011     | 3,210.93                             | 8        | 401.3663       |
| Total of WIs paid during 2011 under the GM contract | 777.00                               | 8        | 97.125         |
| Value of Street Cleansing Contract at Dec 2011      | 0.00                                 | 8        | 0              |
| Value of Arboricultural Contract                    | 111.00                               | 8        | 13.875         |
| Value of Annual Bedding Supply Contract             | 0.00                                 | 8        | 0              |
| Cultural Services contracts and budget              | 0.00                                 | 8        | 0              |
| Other Inocing and water supply                      | 4,000.00                             | 8        | 500            |
| Income - rents                                      | -6,200.00                            | 8        | -775           |
| <b>Sub total</b>                                    | <b>1,898.93</b>                      | 8        | 237.3663       |
| Staff costs                                         | <b>25449.94</b>                      | 8        | 3181.243       |
|                                                     | 27,348.87                            | 8        | 3418.609       |
| Renewals (from capital costs below £85997)          | 4,299.85                             | 0.66     | 6514.924       |
| Total per hectare                                   |                                      |          | 13589.51       |

### For a 20 plot allotment site (6600m<sup>2</sup>) @ 2010 prices

| Item                                 | Unit           | Rate   | Qty  | Total    |
|--------------------------------------|----------------|--------|------|----------|
| Perimeter security fencing weldmesh  | lm             | 49.147 | 200  | 9829.4   |
| Perimeter security fencing Barbican  | lm             | 110.33 | 150  | 16549.5  |
| Gates                                | item           | 932.79 | 1    | 932.79   |
| Access paths                         | lm             | 70.21  | 234  | 16429.14 |
| Car park surfacing                   | m <sup>2</sup> | 30.09  | 1230 | 37010.7  |
| Paving around store and service area | m <sup>2</sup> | 23.069 | 130  | 2998.97  |
| Store                                | item           | 1504.5 | 1    | 1504.5   |
| Portable toilet                      | item           | 742.22 | 1    | 742.22   |
| Total renewals                       |                |        |      | 85997.22 |

|            | Total pa<br>cost | hectares | £/hectare | SPD<br>ha/415<br>dwellings | cost per 415<br>dwellings | cost per<br>dwelling |
|------------|------------------|----------|-----------|----------------------------|---------------------------|----------------------|
| Allotments | 13589.51         | 1        | 13589.51  | 0.2                        | 2717.901598               | 6.549160478          |

## Cemeteries – from existing costs for 2011

| Item                                                          | cost     | hectares | £/ha            |
|---------------------------------------------------------------|----------|----------|-----------------|
| GM contract total contract value at 31 Dec 2011               | 121176.9 | 13.39    | 9049.804        |
| Total of WIs paid during 2011 under the GM contract           | 17363.71 | 13.39    | 1296.767        |
| Value of Street Cleansing Contract at Dec 2011                | 1000     | 13.39    | 74.6826         |
| Value of Arboricultural Contract                              | 7000     | 13.39    | 522.7782        |
| Income                                                        | -76860   | 13.39    | -5740.1         |
| staff costs                                                   | 59612.69 | 13.39    | 4452.031        |
| Renewals £203979 (from the capital costs below) over 20 years | 10198.95 | 4        | 2549.738        |
| <b>Total</b>                                                  |          |          | <b>12205.69</b> |

| Capital hard works for new cemetery | unit           | rate   | qty. | Total    |
|-------------------------------------|----------------|--------|------|----------|
| Fencing chain link                  | lm             | 49.147 | 400  | 19658.8  |
| Fencing bow top                     |                | 100    | 400  | 40000    |
| water                               | item           | 5,000  | 1    | 5000     |
| Entrance gates and feature          | item           | 20,000 | 1    | 20000    |
| Internal roads and parking          | m <sup>2</sup> | 157    | 760  | 119320   |
| total                               |                |        |      | 203978.8 |

|            | Total pa<br>cost in<br>example | hectares<br>in<br>example | £/hectare | SPD<br>ha/415<br>dwellings | cost per<br>415<br>dwellings | cost per<br>dwelling |
|------------|--------------------------------|---------------------------|-----------|----------------------------|------------------------------|----------------------|
| Cemeteries | 12205                          | 1                         | 12205     | 0.6                        | 7323                         | 17.64578             |

## Parks and Recreation Areas

| Item                                | Qty   | Unit           | Rate  | Freq         | Total           |
|-------------------------------------|-------|----------------|-------|--------------|-----------------|
| Paving bound gravel weeding         | 2000  | m <sup>2</sup> | 0.1   | 2            | 400             |
| Hard paving bitmac high use         | 2587  | m <sup>2</sup> | 0     |              | 0               |
| Hard Paving - special               | 1500  | m <sup>2</sup> | 0.1   |              | 0               |
| Board Walks                         | 70    | ea             | 1     | 2            | 140             |
| Bridges                             | 2     | ea             | 200   | 1            | 400             |
| Fencing Special                     | 300   | m              | 0.1   | 1            | 30              |
| Fencing - bow top                   | 120   | lm             | 0.1   | 1            | 12              |
| Walls                               | 900   | m <sup>2</sup> | 0.1   | 1            | 90              |
| Gates pedestrian - special          | 5     | ea             | 20    | 1            | 100             |
| Gates pedestrian - bow top          | 20    | ea             | 20    | 1            | 400             |
| Gates - maintenance                 | 1     | ea             | 20    | 1            | 20              |
| Benches - special                   | 15    | ea             | 2     | 2            | 60              |
| Picnic table - special              | 4     | ea             | 2     | 2            | 16              |
| Benches                             | 24    | ea             | 2     | 2            | 96              |
| Picnic tables                       | 8     | ea             | 2     | 2            | 32              |
| Litter bins - integrated            | 12    | ea             | 0.4   | 130          | 624             |
| Litter bins - free standing         | 11    | ea             | 0.4   | 84           | 369.6           |
| Dog bin                             | 7     | ea             | 4     | 84           | 2352            |
| Signs - entrances                   | 4     | ea             | 1     | 52           | 208             |
| Signs - topics/interpretation       | 13    | ea             | 1     | 52           | 676             |
|                                     | 0     |                |       |              | 0               |
| Trees                               | 720   | ea             | 3     | 1            | 2160            |
| Woodland                            | 8803  | m <sup>2</sup> | 0.02  | 1            | 176.06          |
| Shrubs - ornamental prune           | 3350  | m <sup>2</sup> | 0.27  | 2            | 1809            |
| Shrubs - ornamental weed            | 3350  | m <sup>2</sup> | 0.17  | 3            | 1708.5          |
| Shrubs informal/scrub               | 5117  | m <sup>2</sup> | 0.1   | 1            | 511.7           |
| Formal hedge - new                  | 800   | m <sup>2</sup> | 0.48  | 3            | 1152            |
| Informal hedge - new                | 1500  | m <sup>2</sup> | 0.49  | 2            | 1470            |
| Reovate hedge - existing            | 200   | na             | 20    |              | 0               |
| Herbaceous/bulbs weed               | 100   | m <sup>2</sup> | 8     | 0.30921<br>4 | 247.371<br>1    |
| Herbaceous/bulbs staking etc        | 100   | m <sup>2</sup> | 1     | 1.79400<br>4 | 179.400<br>4    |
| Maringal planting                   | 7380  | m <sup>2</sup> | 1     | 2            | 14760           |
| Grass general amenity               | 77000 | m <sup>2</sup> | 0.014 | 8            | 8624            |
| Grass high profile                  | 3350  | m <sup>2</sup> | 0.04  | 18           | 2412            |
| Meadow /Wildfower grass             | 12100 | m <sup>2</sup> | 0.16  | 2            | 3872            |
| Pond - new                          | 1393  | m <sup>2</sup> | 0.2   | 1            | 278.6           |
| Scrapes/ditches - new               | 4880  | m <sup>2</sup> | 1.6   | 1            | 7808            |
| Clear/re-profile ditches - existing | 100   | lm             | 3.2   | 1            | 320             |
| Culverts/water management           | 10    | ea             | 2.5   | 52           | 1300            |
| support for volunteers              | 1     | item           | 5000  | 1            | 5000            |
| Art                                 | 4     | ea             | 1     | 52           | 208             |
| <b>Total</b>                        |       |                |       |              | <b>60022.23</b> |
| staff costs 12%                     |       |                |       |              | 7202.668        |
| renewal costs from table below      |       |                |       |              | 15363           |
| <b>Total annual costs</b>           |       |                |       |              | <b>82587.9</b>  |

| Item                                | Renew                  | % build cost | Design life years | Build cost | Renewal cost each occasion | Renewal pa   |
|-------------------------------------|------------------------|--------------|-------------------|------------|----------------------------|--------------|
| Paving bound gravel - moderate use  | Wearing course         | 20           | 10                | 80000      | 16000                      | 1600         |
| Hard paving bitmac high use         | Wearing course         | 20           | 10                | 137111     | 27422.2                    | 2742         |
| Hard Paving - special               |                        | 20           | 10                | 105000     | 21000                      | 2100         |
| Board Walks                         | Whole installation     | 100          | 20                | 8400       | 8400                       | 420          |
| Bridges                             | Finshes and fixings    | 10           | 10                | 40000      | 4000                       | 400          |
| Fencing Special                     | Finishes and fixings   | 10           | 10                | 60000      | 6000                       | 600          |
| Fencing - bow top                   | Finishes and fixings   | 10           | 15                | 12000      | 1200                       | 80           |
| Walls                               | Pointing               | 5            | 20                | 108000     | 5400                       | 270          |
| Gates pedestrian - special          | Finishes and fixings   | 10           | 5                 | 7500       | 750                        | 150          |
| Gates pedestrian - bow top          | Finishes and fixings   | 10           | 20                | 7000       | 700                        | 35           |
| Gates - maintenance                 | Whole installation     | 100          | 20                | 400        | 400                        | 20           |
| Benches - special                   | Finishes and fixiningz | 10           | 5                 | 15000      | 1500                       | 300          |
| Picnic table - special              | Finishes and fixings   | 10           | 5                 | 7200       | 720                        | 144          |
| Benches                             | Whole installation     | 100          | 15                | 14400      | 14400                      | 960          |
| Picnic tables                       | Whole installation     | 100          | 15                | 9600       | 9600                       | 640          |
| Litter bins - integrated            | Fixings finishes       | 10           | 5                 | 9600       | 960                        | 192          |
| Litter bins - free standing         | Whole installation     | 100          | 10                | 6600       | 6600                       | 660          |
| Dog bin                             | Whole installation     | 100          | 10                | 2800       | 2800                       | 280          |
| Signs - entrances                   | Whole installation     | 100          | 5                 | 2400       | 2400                       | 480          |
| Signs - topics/interpretation       | All                    | 100          | 5                 | 5200       | 5200                       | 1040         |
|                                     |                        |              |                   | 0          | 0                          |              |
| Trees                               |                        |              |                   | 288000     | 0                          |              |
| Woodland                            |                        |              |                   | 88030      | 0                          |              |
| Shrubs - ornamental                 |                        |              |                   | 201000     | 0                          |              |
| Shrubs informal/scrub               |                        |              |                   | 51170      | 0                          |              |
| Formal hedge - new                  |                        |              |                   | 4000       | 0                          |              |
| Informal hedge - new                |                        |              |                   | 4500       | 0                          |              |
| Reovate hedge - existing            |                        |              |                   | 4000       | 0                          |              |
| Herbaceous/bulbs                    |                        |              |                   | 3000       | 0                          |              |
| Maringal planting                   |                        |              |                   | 221400     | 0                          |              |
| Grass seeding                       |                        |              |                   | 231000     | 0                          |              |
| Grass turfing                       |                        |              |                   | 26800      | 0                          |              |
| Meadow /Wildfower grass             |                        |              |                   | 36300      | 0                          |              |
| Pond - new                          |                        |              |                   | 4179       | 0                          |              |
| Scrapes/ditches - new               |                        |              |                   | 9760       | 0                          |              |
| Clear/re-profile ditches - existing |                        |              |                   | 0          | 0                          |              |
| Culverts/water management           | Whole installation     | 100          | 40                | 10000      | 10000                      | 250          |
|                                     |                        |              |                   | 0          | 0                          |              |
| Art                                 | Finishes and fixings   | 100          | 5                 | 40000      | 40000                      | 2000         |
| <b>Total</b>                        |                        |              |                   |            |                            | <b>15363</b> |

| Parks and recreation grounds | Total pa cost in example | hectares in example | £/hectare | SPD ha/415 dwellings | cost per 415 dwellings | cost per dwelling |
|------------------------------|--------------------------|---------------------|-----------|----------------------|------------------------|-------------------|
|                              | 82587                    | 12.6                | 6554.524  | 0.3                  | 1966.357               | 4.73821           |